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A

MONOGRAPH

OF THE

TROGONIDÆ,

OR

TROGONS.

BY

JOHN GOULD, F.R.S., &c.

TO BE COMPLETED IN FOUR PARTS.

PART I.

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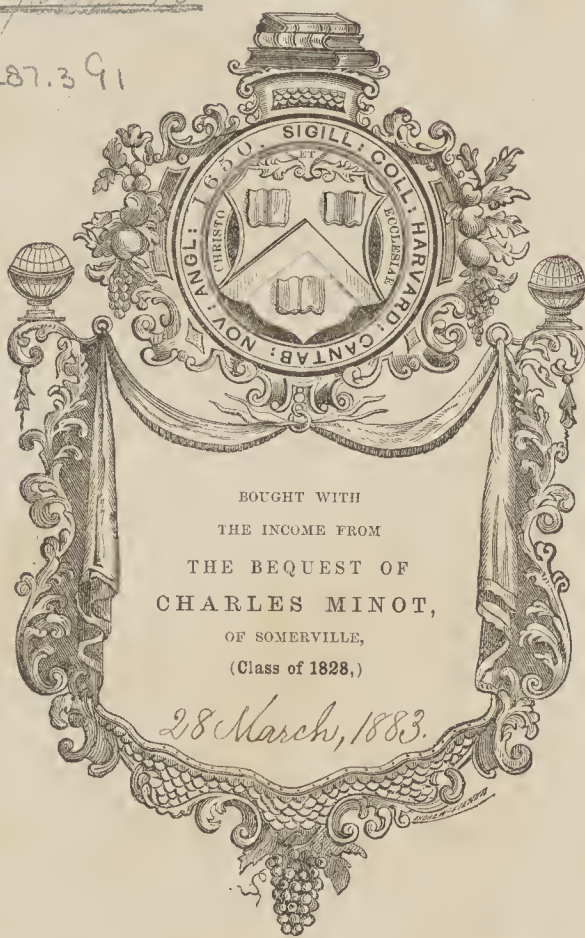
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PHAROMACRUS ANTISIANUS.

J. Gould and H. C. Richter, del. et lith.

Hallman & Walton, Imp.

PHAROMACRUS ANTISIANUS.

Beautiful Train-bearer.

SPECIFIC CHARACTER.

Mas.—*Capite viridi, semi-cristato; rectricibus tribus externis utrinque albis.*

Male.—Head, throat, chest, all the upper surface of the body, wing- and tail-coverts deep bronzy green, the green hue prevailing on the lower part of the back; wings black; under surface of the body and under tail-coverts deep blood-red; thighs black; four centre tail-feathers black; the three outer ones black at the base, and white for the remainder of their length, with black shafts; bill bright yellow.

Total length, $13\frac{3}{4}$ inches; *bill*, 1; *wing*, $7\frac{1}{4}$; *tail*, $7\frac{1}{4}$.

Female.—Head and chest brown, the latter washed with green; wing-coverts and back reddish green; upper tail-coverts golden green; wings black; primaries brownish black, margined with buff; lower part of the abdomen and under tail-coverts light blood-red; tail black, the three outer feathers on each side toothed on their outer webs and narrowly tipped with greyish white.

Trogon Antisianus, D'Orb. Mag. de Zool. 1837, Ois. pl. 85.

——— *antisiensis*, D'Orb. Voy. de l'Am., p. 381. pl. 86. f. 1.

——— (*Calurus*) *pulchellus*, Gould, Mon. of Trog., List of Plates, sp. 22.

——— *pulchellus*, Gould, Mon. of Trog., pl. 22.

——— *Peruvianus*, Gould, MSS.

Calurus antisianus, Gray and Mitch. Gen. of Birds, vol. i. p. 71, *Calurus*, sp. 7.—Ib. List of Spec. of Birds in Coll. Brit. Mus., part ii. sect. 1, *Fissirostres*, p. 46.—Sclater in Proc. of Zool. Soc., part xxiii. p. 137.

——— *pulchellus*, Bonap. Consp. Gen. Av., p. 152, *Calurus*, sp. 6.

It would appear that science is indebted to M. Alcide D'Orbigny, the celebrated French traveller, for the discovery of this exceedingly beautiful species; for it was in his collection that I first saw an example during my visit to Paris in 1837. At that time the female was unknown, nor had it been discovered when the first edition of this monograph was published. In the interval between 1837 and 1858 many novelties have been obtained, not only in this group of birds, but in most other departments of zoology and the allied sciences, and I am now, therefore, enabled to figure both sexes of this fine bird, and to state that it not only inhabits Peru, but that it is also found in Ecuador, and as far south as Santa Fé de Bogota in New Grenada, as is proved by my having at this moment before me a specimen from the latter province, and another sent me by Professor Jameson from Quito: in all probability Bogota is its utmost northern limit, and Ecuador and Peru its true and native habitat. It is without question a truly beautiful species, the bright raised tuft of green feathers which rise above the nostrils adding much to its elegance, and, together with the all but wholly white outer tail-feathers, at once distinguishing it from the *P. fulgidus*.

“We have met with this species,” says M. D'Orbigny, “in the midst of the hot and humid forests of the Yungas to the east of the Andes in the republic of Bolivia: there it is always rare, and almost entirely confined to the neighbourhood of the torrents in the thickest parts of the woods. Its manners, like those of the other members of the genus to which it belongs, are melancholy and wild. One often hears in the morning and in the evening its monotonous cry, which nearly resembles the word *Couroucou*; but how many difficulties are there to be conquered before one can reach this bird in the midst of a country perhaps, the most unfrequently visited of the world!”

The Plate represents both sexes of the size of life.



PHAROMACRUS FULGIDUS, Gould

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton, Imp.

PHAROMACRUS FULGIDUS, *Gould.*

Shining Train-bearer.

SPECIFIC CHARACTER.

Mas.—*Capite aureo-viridi; rectricibus tribus externis utrinque ad basin nigris, per partem apicalem dimidiam albis.*

Male.—Face and head golden bronze; chest, wing-coverts, upper surface of the body and upper tail-coverts deep golden green; wings jet-black; tail black, the apical portion of the three outer feathers on each side white, with black shafts; under surface very deep blood-red; thighs black; bill rich yellow.

Total length, $12\frac{3}{4}$ inches; *bill*, 1; *wing*, $7\frac{1}{4}$; *tail*, 7.

Female.—Head dark brown; chest brown, washed with green on its upper portion; wing-coverts and back reddish or bronzy green; upper tail-coverts golden green; wings black; primaries blackish brown, margined with buff; lower part of the abdomen and under tail-coverts light blood-red; tail black, the three lateral feathers on each side toothed on their external webs and narrowly tipped with greyish white.

Trogon (Calurus) fulgidus, Gould, Mon. of Trogons, List of Plates, sp. 24.

Trogon fulgidus, Gould, Mon. of Trog., pl. 24.

Calurus fulgidus, Gray and Mitch. Gen. of Birds, vol. i. p. 71, *Calurus*, sp. 6.—Ib. List of Spec. of Birds in Coll. Brit. Mus., pt. ii. sect. 1, *Fissirostres*, p. 46.—Bonap. Consp. Gen. Av., p. 152, *Calurus*, sp. 4.—Sclater in Proc. of Zool. Soc., part xxiii. p. 137.

THE *Pharomacrus fulgidus*, like the *P. Antisianus*, has of late years been sent to Europe in tolerable abundance from Venezuela, whence many specimens were brought by the late Mr. Dyson. It occasionally arrives in collections from Bogota; in what locality these latter specimens have been collected is unknown to me, but I believe the bird is only found to the westward, and perhaps the north-westward of that city.

It may be at all times distinguished from the *P. Antisianus* by the basal half of the tail-feathers being black, and the terminal portion only being white; it has also a more golden-coloured head, and a lesser amount of the tufted crest-like feathers which spring from before the nostrils; in size also it is rather smaller.

The specimens from which the figures in the first edition of this monograph were taken, and which were at that time in the possession of Madame Goubie, of Paris, were not fully adult, and consequently the bills were not so highly coloured as at the period of maturity.

The Plate represents both sexes of the natural size.



PHAROMACRUS AURICEPS, Gould

J. Gould and H. C. Richter, del et lith

Hallman and A. Walton, Imp

PHAROMACRUS AURICEPS, *Gould.*

Golden-headed Train-bearer.

SPECIFIC CHARACTER.

Mas.—*Capite splendide aureo-viridi ; rostro flavo ; caudâ in toto nigrâ.*

Male.—The whole of the head, throat, cheeks and back of the neck golden bronze ; chest, all the upper surface, wing- and tail-coverts rich golden green ; wings and tail jet-black ; breast, abdomen and under tail-coverts of the deepest blood-red, inclining to crimson ; feathers clothing the tarsi black ; bill yellow ; feet reddish brown.

Total length, $15\frac{1}{2}$ inches ; *bill*, $1\frac{1}{4}$; *wing*, 8 ; *tail*, 8.

Female.—Face, chin and head chocolate-brown ; chest, upper surface, wing- and tail-coverts golden green ; wings brownish black ; primaries margined with buff ; across the breast a band of brown ; abdomen and under tail-coverts blood-red ; tail black, the three outer feathers toothed on their outer webs and slightly tipped with white ; bill blackish brown.

Trogon (Calurus) auriceps, Gould in Ann. and Mag. Nat. Hist., vol. ix. p. 238.

Calurus auriceps, Gray and Mitch. Gen. of Birds, vol. i. p. 71. pl. 25, *Calurus*, sp. 6.—Ib.

List of Spec. of Birds in Coll. Brit. Mus., part ii. sect. 1, *Fissirostres*, p. 46.—Bonap. Consp.

Gen. Av., p. 152, *Calurus*, sp. 3.—Selater in Proc. of Zool. Soc., part xxiii. p. 137.

LIKE the other members of the genus, this large and powerful species of *Pharomacrus* appears to be strictly a dweller among mountainous districts, and to be especially abundant in the neighbourhood of Santa Fé de Bogota, great numbers being comprised in every large collection of birds sent from that city ; I also possess a single specimen which was transmitted to me direct from Quito by Professor Jameson ; it is probable, therefore, that it may hereafter be found to inhabit all the intermediate countries between these two somewhat distant localities. Like the *P. Pavoninus*, this species has a black tail ; but it differs from that bird in many other respects, especially in its much greater size and in the bright yellow colouring of its bill, which organ is blood-red in *P. Pavoninus*. Dr. Percy has called my attention to an interesting article on the colouring matter of this species by M. An. Bogdanow, of Moscow, in the “Comptes Rendus,” tom. xlv., Nov. 1857 ; but as these observations are more fitted for the Introduction, they are omitted here.

I am not quite certain whether the bird represented by the back figure in the accompanying Plate is a young male or a female, but I believe it to be the former ; still, to distinguish the young males from the females with certainty, it will be necessary to resort to actual dissection.

The figures are of the natural size.



EUPTILOTIS NEOXENUS, *Could*

J. Gould and H. C. Richter, del. et lith.

Hall and W. J. Walton, imp.

EUPTILOTIS NEOXENUS, *Gould.*

Welcome Trogon.

SPECIFIC CHARACTER.

Mas.—*Rostro cærulescenti-cinereo ; vertice, pectore, sic et dorso summo aurantiaco-viridibus ; capite cum penicillo gracili et elongato utrinque ornato ; corpore subtus coccineo.*

Male.—Face, ear-coverts, lengthened tufts posterior to the eye, and chin black ; head oil-green ; chest, sides of the neck, tips of the wing-coverts and upper surface bronzy green, passing into bluish green on the lower part of the back and upper tail-coverts ; bases of the wing-coverts and wings brownish black ; the primaries margined at the base of their external webs with white ; under surface and under tail-coverts fine blood-red ; thighs dull black ; tail deep bluish green, the three outer feathers on each side largely tipped with white ; bill dark horn-colour.

Total length, $13\frac{1}{4}$ inches ; *bill*, $1\frac{1}{4}$; *wing*, 8 ; *tail*, 8.

Female or Young Male.—Head and face blackish brown ; breast olive-brown, slightly washed with bronzy green ; upper surface and tail as in the male, but not so brilliant ; wings similar, but paler, and with some blotches of dull buffy white on the innermost secondaries ; abdomen and under tail-coverts light blood-red.

Trogon (Calurus) neoxenus, Gould, Mon. of Trogons, List of Plates, sp. 25.

—— *neoxenus*, Gould, Mon. of Trogons, pl. 25.

Calurus neoxenus, Gray, List of Spec. of Birds in Coll. Brit. Mus., p. 46.—Gray and Mitch. Gen. of Birds, vol. i. p. 71, *Calurus*, sp. 5.—Bonap. Consp. Gen. Av., p. 152, *Calurus*, sp. 5.

I FIRST became acquainted with this species about the year 1836, when an immature specimen came into my possession, an examination of which satisfied me that it was the young of a very splendid bird, which could not fail of being welcomed with feelings of gratification by every ornithologist ; I therefore gave it the name of *Trogon neoxenus* (Welcome Trogon), and figured it under that appellation in the first edition of this monograph. Subsequently an adult example of each sex were presented to me by the late Mr. Floresi, to whose memory a tribute is due for his exertions in the cause of natural science. An examination of these additional examples at once convinced me that the species did not belong to the genus *Pharomacrus*, as I had previously supposed, but exhibited characters differing not only from those of that genus, but from those of all the other genera of the family, and consequently that a new genus must be established for its reception, and this I have accordingly done, under the appellation of *Euptilotis*. It will be seen, on reference to the accompanying Plate, that not only does the bird differ from the *Pharomacri* in the character of its plumage, but that it has a more lengthened and less robust bill, and that the head is adorned with long and fine hair-like plumes,—a feature very unusual among the Trogons, and which is only to be found in this species and to a certain extent in *Priotelus temnurus* and *Trogon roseigaster*.

I regret that I did not learn from Mr. Floresi what particular part of Mexico this bird inhabits ; but I have every reason to believe that it dwells on all the high lands, even farther north than the city, and probably in the neighbourhood of the Real del Monte mines, as it was in that district that most of his birds were procured. At present it is extremely rare in our collections, and examples of no one member of the class AVES would be more welcome to collectors both in this country and on the continent of Europe.

The figures are of the natural size.



TROGON PUELLA, Gould.

J. Gould and H. C. Richter, del. et lith.

Hillman and Watson, Imp.

TROGON PUELLA, Gould.

Rayed-tail Trogon.

SPECIFIC CHARACTER.

Mas.—*Corpore subtùs coccineo ; caudâ nigrâ ; rectricibus tribus externis crebrè albo fasciatis.*

Male.—Lores, ear-coverts and throat black ; head, all the upper surface and chest green ; wings black, the coverts and secondaries freckled with white, and the primaries with a narrow line of white along the basal portion of their outer webs ; all the under surface scarlet, separated from the green of the chest by a semilunar mark of white ; two middle tail-feathers deep yellowish green ; the two next on each side yellowish green on their outer, and black on their inner webs, the whole six tipped with black ; three outer feathers on each side black, crossed by numerous narrow bars of, and narrowly tipped with, white ; thighs black ; bill orange ; irides reddish brown ; eyelash light coral-red ; feet dark grey.

Total length, $10\frac{1}{2}$ inches ; *bill*, $\frac{7}{8}$; *wing*, $5\frac{1}{4}$; *tail*, 6.

Female.—Face and throat dull black ; chest and all the upper surface olive-brown, becoming richer or more yellow on the upper tail-coverts ; wings blackish brown ; the primaries margined externally with white ; wing-coverts and secondaries brown, freckled with black ; under surface light scarlet, separated from the brown of the chest by a semilunar mark of white ; two centre tail-feathers rich brown ; the two next on each side rich brown on their outer and black on their inner webs, all six tipped with black ; three outer feathers on each side blackish brown, minutely dotted on their outer webs, and on a portion of their inner webs near the tip, with blackish brown on a greyish white ground, these dottings set so thickly as to form a bar near the tip, the extremity of which is greyish white ; under mandible, and base of the upper, yellow ; culmen brownish black.

Trogon puella, Gould in Proc. of Zool. Soc., part xiii. p. 18.—Gray and Mitch. Gen. of Birds, vol. i. p. 70, *Trogon*, sp. 24.—Bonap. Consp. Gen. Av., p. 149, *Trogon*, sp. 8.

——— *Xalapensis*, DuBus, Esq. Orn. pl. 5.

THIS well-marked Trogon is an inhabitant of Central America, particularly the countries of Honduras and Guatemala ; and that it must be common in the Vera Paz Mountains, is evidenced by the numbers which have been sent to this country by George U. Skinner, Esq. The only figure of this bird with which I am acquainted is that published by the Baron DuBus in his “*Esquisses Ornithologiques*” under the name of *Trogon Xalapensis*, from which appellation it would appear that it extends its range to Mexico ; but personally I have not received or seen examples from that country.

The *Trogon puella* is rendered one of the most conspicuous members of its family by the markings of the tail, which consist of a series of narrow cross-bars of white on a jet-black ground, extending throughout the apical portion of each of the three outer tail-feathers ; the usual terminal broad band of white being absent, or but slightly indicated by the last white bar being a trifle broader than the rest. The female differs very much from the male, not only in having those parts of her plumage brown which are green in the other sex, but also in the total absence of bars on the three outer tail-feathers, those feathers being merely clouded or sprinkled with extremely small dots of dark brown on a light greyish white ground, with a narrow bar of black succeeded by another of white at the tip.

The Plate represents both sexes of the natural size.



TROGON AURANTIVENTRIS, Gould.

J. Gould and H.C. Richter, del. & lith.

Hallman and S. Walton, engr.

TROGON AURANTIIVENTRIS, *Gould.*

Orange-breasted Trogon.

SPECIFIC CHARACTER.

Mas.—*Corpore subtus aurantiaco ; caudâ nigrâ, rectricibus tribus externis utrinque albo crebrè fasciatis.*

Male.—Lores, ear-coverts and throat black ; head, all the upper surface and chest bronzy green ; wings brownish black ; the coverts and secondaries freckled with white, and the primaries with a narrow line of white along the basal portion of their outer webs ; all the under surface orange, separated from the green of the chest by a semilunar mark of white ; two middle tail-feathers deep yellowish green ; the two next on each side yellowish green on their outer, and black on their inner webs, the whole six tipped with black ; three outer tail-feathers on each side black, crossed by numerous narrow bars of, and narrowly tipped with, white ; thighs black ; bill orange ; irides reddish brown ; eyelash light coral-red ; feet grey.

Total length, 10 inches ; *bill*, $\frac{7}{8}$; *wing*, 5 ; *tail*, $5\frac{3}{4}$.

Female.—Face and throat dull black ; chest and all the upper surface olive, becoming richer or more yellow on the upper tail-coverts ; wings black ; the primaries margined externally with white ; wing-coverts and secondaries olive, freckled with black ; under surface light orange, separated from the olive of the chest by a semilunar mark of white ; two centre tail-feathers rich brown ; the two next on each side rich brown on their outer, and black on their inner webs, all six tipped with black ; three outer feathers on each side blackish brown, minutely dotted on their outer webs, and on a portion of their inner webs near the tip, with blackish brown on a greyish-white ground, these dottings set so thickly as to form a bar near the tip, the extremity of which is greyish white ; base of the upper mandible and under mandible yellow ; culmen brownish black.

Trogon aurantiiventris, Gould in Proc. of Zool. Soc., part xxiv. p. 107.—Selater in Ibid., pp. 139, 286.

——— *Sallæi*, Bonap. Compt. Rend., May 1856.

THIS bird is much more rare in the collections of Europe than the *Trogon puella*, from which it differs only in the colouring of the under surface being deep orange instead of scarlet. I think it probable that the *T. puella* and *T. aurantiiventris* may ultimately prove to be merely varieties or races of one and the same species. I have seen analogous instances among some of the Brazilian Trogons, and further investigation of the subject may throw some light upon this supposition ; should it be confirmed, the species of the family will be somewhat diminished ; at present I have no alternative but to consider and figure them as distinct, a step which would even be necessary were they to prove identical, since representations of both states of plumage would be requisite to their due illustration. I believe that no change of colouring from orange to scarlet, or from scarlet to orange, takes place, but that each colour is assumed from the beginning.

The native country of the Orange-breasted Trogon is the Pacific side of Veragua and Costa Rica. In Mr. Selater's "List of Mammals and Birds collected by Mr. Bridges in the vicinity of the Town of David, in the Province of Chiriqui, in the State of Panama," published in the twenty-fourth part of the "Proceedings of the Zoological Society," it is stated to inhabit the dense forest on the Boqueti, and that it is also found further down towards David ; and in his "Catalogue of the Birds collected by M. Auguste Sallé in Southern Mexico," published in the same part of the Society's "Proceedings," it is stated that he found this bird near the town of Cordova, in the State of Vera Cruz : if this be really the case, the opinion given above is greatly strengthened, inasmuch as *T. puella* is also said to have been found there.

I must remark that the female, as well as the male, has the breast orange, and that with this exception the colouring is precisely the same as that of *T. puella*. My specimens of *T. aurantiiventris*, however, are a trifle smaller than those of *T. puella*.

The Plate represents both sexes of the natural size.



TROGON MELANOCEPHALUS, Gould

J. Gould and H. C. Richter del. et lith.

Hollenbach & Walton Imp.

TROGON MELANOCEPHALUS, *Gould.*

Black-headed Trogon.

SPECIFIC CHARACTER.

Mas.—*Vertice pectoreque sordide nigris; corpore dorso, in toto, violaceo, viridi lucide lavato; rectricibus tribus externis nigris, ad apicem albis.*

Male.—Head, occiput, throat and chest black; scapularies and back glossy bluish green, passing into violet-blue on the upper tail-coverts; wings black, the basal portion of the outer webs of the primaries fringed with white; two centre tail-feathers greenish blue, tipped with black; the remaining tail-feathers black, the three outer ones on each side largely tipped in a square form with white; breast and under tail-coverts rich gamboge-yellow; thighs black; bill horn-colour.

Total length, $10\frac{1}{2}$ inches; *bill*, 1; *wing*, $6\frac{1}{2}$; *tail*, $6\frac{1}{2}$.

Female.—Head, throat, chest, all the upper surface, wings and tail slaty black; basal portion of the outer webs of the primaries margined with white; three outer tail-feathers squarely tipped with white; abdomen and under tail-coverts gamboge-yellow; thighs black.

Young male.—General plumage slaty black, with a wash of green on the back and upper tail-coverts; the wing-coverts and secondaries with a series of buff markings of different sizes and shapes on their outer webs; the two centre tail-feathers deep bronzy-green, the lateral feathers slightly toothed with white, and the white of the tips prolonged for some distance up the outer web, instead of being of a square form, as in the adult; feathers of the centre of the abdomen and the posterior under tail-coverts clouded black and white.

Trogon melanocephala, Gould, Mon. of Trogons, pl. 12.

—— *melanocephalus*, Gray, List of Spec. of Birds in Coll. Brit. Mus., p. 42.—Gray and Mitch., Gen. of Birds, vol. i. p. 70, *Trogon*, sp. 17.—Bonap. Consp. Gen. Av., p. 149, *Trogon*, sp. 16.—Selater in Proc. of Zool. Soc., part xxv. p. 227.

THE Trogons of Central America and Mexico possess peculiar characteristics, which at once separate them from the species found in Brazil and other parts of South America. In the present case we find a Trogon with a black head, a character not found in any other American species. When fully adult, the male is really a fine bird, the greenish blue of the back being very beautiful, and the three black outer tail-feathers, with their bold and squarely-formed white tips, showing very conspicuously: this latter feature would seem to be common to both sexes, that is, if the birds in my collection with a uniform sooty head, back and chest be of this sex. I say, if the birds so coloured be of this sex, because a suspicion has sometimes arisen that they may constitute another species; but until this be proved, I shall consider them as females of *T. melanocephalus*. I possess a youthful male of this species, having slight indications of white bars on the three outer tail-feathers, especially on their external margins; their tips are white, as in the adult; at this age these feathers do not present the remarkable truncate form of those of the adult, but are narrower and inclined to be pointed. Very young individuals are beautifully marked: one, which I presume to be about six weeks old, is represented by the lower figure in the accompanying Plate; it is in the collection of T. C. Eyton, Esq.

As stated in the former edition of this monograph, the first specimen I obtained of this species was from Tamaulipas; since then I have received fine examples from Mexico and Honduras.

The figures are of the natural size, with a reduced representation of the female.



TROGON RAMONIANA, *Castlenau*

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton, Imp.

TROGON RAMONIANUS.

Ramon De la Sagra's Trogon.

SPECIFIC CHARACTER.

Mas.—*Facie nigrá ; vertice et pectore resplendenti-cæruleis ; abdomine aurantiaco ; alis nigris ; rectricibus tribus externis utrinque nigris, fasciis albis regulariter ornatis ad apicem singulis albis.*

Male.—Face, ear-coverts and throat black ; head, nape and gorget across the breast deep rich purplish blue, passing, in some specimens, into green on the outer edges ; back and scapularies bronzy green, passing into pure green on the lower part of the back and upper tail-coverts ; wing-coverts and secondaries black ; primaries brownish black, slightly fringed with white ; flanks slaty black ; abdomen and under tail-coverts fine orange-yellow ; thighs black ; two centre tail-feathers green ; the two next on each side green on their outer, and brownish black on their inner webs ; all six tipped with black ; three lateral feathers on each side black, conspicuously barred, and largely tipped with white ; bill light horn-colour. Total length, $9\frac{1}{4}$ inches ; *bill*, $\frac{7}{8}$; *wing*, $4\frac{1}{2}$; *tail*, $5\frac{1}{2}$.

Female.—Head, neck, chest and upper surface brownish black ; wing-coverts and secondaries black, crossed by fine lines of white ; under surface light orange-yellow.

Trogon Ramoniana, Deville et Des Murs in Rev. Zool. 1849, p. 331.—Castelnau, Expéd. Amér. du Sud, Zool., Ois., p. 33. pl. xi. fig. 2.

THIS bird was first characterized by MM. Deville and O. DesMurs in the "Revue Zoologique" for the year 1849, and was subsequently described and figured in the zoological portion of M. Castelnau's "Expédition de l'Amérique du Sud," from specimens brought to Europe by that gentleman. Besides the examples procured by M. Castelnau, several others have come under my notice ; and I have myself received specimens from Mr. Hauxwell, which had been obtained on the Upper Amazon, and still more recently others procured on the river Napo, through the Messrs. Verreaux, of Paris, from which we may gather that the true habitat of the species is the eastern side of the Peruvian Andes ; but over what extent of country it ranges, time and future research alone can inform us.

M. Castelnau states that his examples were procured at "La Mission de Sarayacu, Pampa del Sacramento, au Pérou."

The *Trogon Ramonianus* is an exceedingly well-marked species, and one which cannot be confounded with any other.

The figures are of the natural size.



TROGON CALIGATUS, *Gould*.

J. Gould and H. C. Richter, del. et lith.

Hallman and W. A. Wood, imp.

TROGON CALIGATUS, Gould.

Gartered Trogon.

SPECIFIC CHARACTER.

Mas.—*Vertice et gula nigris ; ad nucham, sic et ad gulam cærulescenti-violaceo conspicuè marginatis ; humeris, tectricibusque alarum nigro cum cinereo irroratis ; abdomine flavo ; tarsis nigris, albo succinctis ; rectricibus tribus externis utrinque nigro alboque fasciatis.*

Male.—Face, head, throat and ear-coverts black, bounded at the back of the neck by a collar, and on the breast by a broad gorget of bluish green in some specimens, and purplish green in others ; upper surface green, washed with bronze on the back and scapularies ; wings black, the basal portion of the primaries margined with white ; wing-coverts and outer webs of the secondaries grey, marked transversely with very minute, irregular and wavy lines of black ; two centre tail-feathers and the outer web of the next on each side deep glossy green, the inner webs of the two latter, and the tips of all six black ; the three lateral feathers on each side alternately barred with black and white, and largely tipped with white ; flanks grey ; centre of the abdomen and under tail-coverts orange-yellow ; feathers of the thighs and tarsi black, terminating in a fringe of white immediately above the toes ; bill bluish horn colour ; feet olive.

Total length, 8 inches ; *bill*, $\frac{7}{8}$; *wing*, $4\frac{3}{4}$; *tail*, 5.

Female.—Head, throat, chest, back and upper tail-coverts slaty black ; wings black ; primaries margined at the base with white ; coverts and outer webs of the secondaries transversely rayed with white ; two centre tail-feathers slaty black, the two next on each side brown ; all six tipped with jet-black ; three outer feathers on each side blackish brown on their inner webs, white on their outer, crossed by numerous bands of black, and largely tipped with white ; under surface fine orange-yellow.

Trogon caligatus, Gould, Mon. of Trogons, pl. 7.—Gray, List of Spec. of Birds in Coll. Brit. Mus., p. 43.—Gray and Mitch. Gen. of Birds, vol. i. p. 70, *Trogon*, sp. 18.—Bonap. Consp. Gen. Av., p. 149, *Trogon*, sp. 17.—Sclater in Proc. of Zool. Soc., part xxiv. p. 286.

To commit an error, although unintentionally, leads to unpleasant reflection ; to acknowledge and amend it is becoming to every one ; but this should more particularly be done by the man of science ; I must therefore confess that I certainly did make a mistake in my former illustration of this species, when I coloured the entire head blue instead of black, and thereby sadly puzzled every ornithologist who has had occasion to study this group of birds : how the error arose I cannot imagine, and had I not still by me the original specimen from which the figure was taken and coloured, I might not have detected the mistake I had made, and which is duly corrected in the accompanying Plate.

The *Trogon caligatus* enjoys a wider range of habitat than most of the other species of the family. Its head-quarters, or, more properly, the centre of its area, is Guatemala, whence it extends as far north as Cordova in Mexico, and south as the Isthmus of Panama, and, if I mistake not, to the Caraccas and Venezuela, as I possess skins which I believe were collected in those countries. Some trifling differences exist between the Caracca specimens and those from Mexico, and both slightly differ from Guatemalan examples. The Cordovan specimens are the largest, those from Caracca the smallest, while the Guatemalan are intermediate in size ; still these differences are so slight that they can only be regarded as mere varieties or races of one and the same species.

The *Trogon caligatus* is a neat and compact little bird, and the bright orange of its breast must form a very striking and effective contrast to the dense foliage of the gloomy forests which this and the other members of the genus are known to inhabit.

The Plate represents the two sexes of the natural size.



TROGON ROSEIGASTER, *Vall.*

TROGON ROSEIGASTER, Vieill.

St. Domingo Trogon.

SPECIFIC CHARACTER.

Mas.—*Capite summo et nuchâ olivaceo-viridibus ; gulâ pectoreque cinereis ; humeris tectricibusque alarum nigris, plumis singulis angustè albo fasciatis.*

Male?—Lores greenish black ; crown of the head, nape and upper surface deep oil-green, passing into purer green on the lower part of the back and upper tail-coverts ; wings slaty black, the coverts and secondaries crossed by numerous transverse well-defined lines of greyish white ; primaries barred throughout the entire length of their outer webs with white ; chin, throat, breast and upper part of the abdomen dark grey ; lower part of the abdomen and under tail-coverts deep blood-red ; two centre tail-feathers bluish green on their outer webs and on the tips of both webs ; their inner webs, and a small portion of the outer web near the tip, oil-green ; the two next on each side bluish green ; the three outer ones on each side bluish green, largely tipped with white ; a considerable portion of the outer web is also white, interrupted near the tip by an oval spot of bluish green ; bill yellow.

Total length, $11\frac{1}{2}$ inches ; *bill*, $\frac{7}{8}$; *wing*, $5\frac{3}{4}$; *tail*, $6\frac{1}{2}$.

Female?—Similar in the general arrangement of the colouring, but the wing-coverts bronzy green and destitute of the white transverse markings, and the primaries margined instead of being barred with white.

Trogon roseigaster, Vieill. Ency. Méth. Orn., part iii. p. 1358.—Gould, Mon. of Trogons, pl. 20.—Bonap. Consp. Gen. Av., p. 149, *Trogon*, sp. 10.—Gray and Mitch. Gen. of Birds, vol. i. p. 69, *Trogon*, sp. 10.—Selater in Proc. of Zool. Soc., part xxv. p. 235.

——— *domicellus*, Cuv.

——— *rhodogaster*, Temm.

——— (*Temnurus*?) *roseigaster*, Gould, Mon. of Trogons, List of Plates, sp. 20.

Le Couroucou à caleçon rouge, ou Le Couroucou Damoiseau, LeVaill. Hist. Nat. des Courouc., pl. 13.

WE are much indebted to M. Sallé for having amply supplied us with specimens of this very beautiful species of Trogon, which previously was only known to ornithologists from the very bad drawing in LeVaillant's "Histoire Naturelle des Couroucous." Its native country is St. Domingo, where several trivial names are applied to it ; in some of the provinces it is called *Caleçon rouge*, in others *Dame*, or *Demoiselle Anglaise* ; and also *Pie de Montagnes*, from its continually residing among the mountains. In Mr. Selater's paper on the birds observed by M. Sallé in Southern Mexico, published in the twenty-fifth part of the "Proceedings of the Zoological Society," with notes by M. Sallé, it is stated, on his authority, that the bird "restricts itself to the tops of the loftiest mountains of the interior of the island, and goes in small bands uttering a plaintive cry, by imitating which you can entice them near enough to fire upon them ; they perch on the loftiest trees, and eat berries of considerable size, which they swallow entire ; they make their nests in the old holes of Woodpeckers, piercing them through to the opposite side ; their eggs are white and rounded ; they are called *Piragua*."

It is much to be regretted that M. Sallé does not inform us what, if any, are the sexual differences in the colouring of this bird, or whether the specimens with fine transverse lines on the wing-coverts are males or females ; I have little doubt, however, that this character is peculiar to the males ; and if so, the prominent figure in the accompanying Plate represents a female.

Vicillot was certainly mistaken when he stated that this bird is found in Mexico ; I question very much whether it occurs in any other country than St. Domingo ; if it does not, it affords another instance of the West Indian Islands being tenanted by peculiar species.

The figures are of the natural size.



TROGON AMBIGUUS, *Gould*.

J. Gould and W. C. Broder, del. et lith.

Hallman del. & Wallace, imp.

TROGON AMBIGUUS, Gould.

Doubtful Trogon.

SPECIFIC CHARACTER.

Mas.—*Facie nigrâ ; pectore et corpore suprâ aureo-viridibus ; humeris tectricibusque alarum ornatè cinereis et fusco irroratis ; rectricibus tribus externis utrinque albis, crebrè fuscescenti-nigro punctis ; rectricibus quatuor intermediis fuscescenti-rufis cum apicibus nigris.*

Male.—Face and throat black ; chest, sides and back of the neck, and upper surface rich golden bronze, gradually passing into golden green on the lower part of the back ; primaries black, margined externally with white ; wing-coverts and secondaries grey, finely marked with transverse zigzag lines of black ; two centre tail-feathers rich fiery-red bronze, broadly tipped with black ; the two next on each side blackish brown, broadly tipped with black ; three outer feathers on each side brownish black at the base and white at the tip, the intermediate portion being white, minutely dotted or freckled with black, the freckles assuming the form of a distinct but irregular narrow bar where the freckling terminates ; breast and under surface rich scarlet, separated from the green of the throat by a crescent of white ; tarsi slate-grey, gartered below with scarlet and white ; bill bright yellow.

Total length, 11 inches ; *bill*, $\frac{7}{8}$; *wing*, 5 ; *tail*, $6\frac{1}{4}$.

Female.—A mark of white behind the eye and on the ear-coverts ; head, upper surface and chest light olivaceous brown ; primaries brown, margined with white ; wing-coverts and outer webs of the secondaries light olivaceous brown, minutely rayed with black ; two centre tail-feathers cinnamon-brown, tipped with black ; the two next on each side brown, margined with cinnamon-brown ; three lateral feathers brown at the base, crossed on their margins and near the extremity with irregular freckled bands of brown on a white ground ; upper part of the breast pale brown ; lower part of the abdomen and under tail-coverts scarlet, separated from the brown by a band of greyish white ; bill yellow.

Trogon ambiguus, Gould in Proc. of Zool. Soc., part iii. p. 30.—Ib. Mon. of Trogons, pl. 4.—Gray and Mitch. Gen. of Birds, vol. i. p. 69, *Trogon*, sp. 11.—Bonap. Consp. Gen. Av., p. 149, *Trogon*, sp. 11.

I have ventured to separate this bird from the *Trogon elegans*, to which it closely assimilates. The points of difference consist in the obscure and pale, but finely-dotted markings of the outer tail-feathers, in opposition to the strong and well-defined black bars on the same part in *Trog. elegans*, while at the same time the centre of the wing is much more finely and minutely barred in the former than in the latter. Had I seen only a single individual of each of these birds, I might have taken a different view of the subject ; but my comparisons having been made upon several individuals, I feel but little hesitation in assigning to the present bird, at least provisionally, the rank of a distinct species.

The localities in which these two birds appear to be indigenous are distinctly separated from each other, —all the examples I have seen of *Trogon ambiguus* having been exclusively received from the northern and western States of Mexico, while the *Trogon elegans* is strictly limited to the southern and Guatemala.

A figure and description of this bird appeared in the first edition of this monograph, and after a lapse of twenty years I am unable to add any further information respecting it, save that I have in the interval received other specimens from San Blas. Besides the differences pointed out above, I observe that the tail is fully an inch shorter than that of *T. elegans*, and that the *T. ambiguus* is altogether smaller than that species. Another point of difference also occurs in the bright fiery bronze colouring of the two middle tail-feathers, which cannot be excelled in richness, and which is but slightly indicated in *T. elegans*, the corresponding feathers in that bird having only a wash of this fine tint.

The Plate represents the two sexes of the natural size.



HARPACTES DUVAUCELI.

J. Gould and H. C. Richter, del. et lith.

Hallman and J. A. Walton, imp.

HARPACTES DUVAUCELI, Temm.

Duvaucel's Trogon.

SPECIFIC CHARACTER.

Mas.—*Capite et gula nigris ; dorso fusco ; uropygio nitide coccineo.*

Male.—Head and throat jet-black ; breast, under surface, rump and upper tail-coverts of the finest scarlet ; back reddish cinnamon-brown ; wings black, the coverts and secondaries crossed by numerous fine lines of white ; primaries margined at the base of their external webs with white ; two centre tail-feathers dark cinnamon-brown, tipped with black ; the two next on each side blackish brown ; the three outer ones on each side blackish brown at the base, and largely tipped with white ; bill, gape, and a naked space over the eye ultramarine blue ; irides reddish brown ; feet blue.

Total length, $9\frac{1}{2}$ inches ; *bill*, 1 ; *wing*, 4 ; *tail*, $5\frac{1}{4}$.

Female.—Head dark brown ; back dark cinnamon brown, becoming lighter and washed with scarlet on the lower part of the back and upper tail-coverts ; wing-coverts and secondaries alternately barred with ochreous and black ; primaries dull black, margined externally with greyish white ; under surface orange-brown, becoming lighter and washed with scarlet on the lower part of the abdomen and under tail-coverts ; two centre tail-feathers light cinnamon-brown throughout their entire length, the remainder as in the male.

Trogon Duvaucelii, Temm. Pl. Col. 291.—Gould, Mon. of Trogons, pl. 32.

Harpactes rutilus, Gray, List of Spec. of Birds in Coll. Brit. Mus., p. 44.—Gray and Mitch.

Gen. of Birds, vol. i. p. 71, *Harpactes*, sp. 5.—Blyth, Cat. of Birds in Mus. Asiat. Soc.

Calcutta, p. 80.—Bonap. Consp. Gen. Av., p. 150, *Harpactes*, sp. 1.—Horsf. and Moore,

Cat. of Birds in Mus. East Ind. Comp., vol. ii. p. 712.

Trogon rutilus, Vieill. 2^{de} édit. du Nouv. Dict. d'Hist. Nat., tom. viii. p. 313.—Ib. Ency.

Méth. Orn., part iii. p. 1358.—LeVaill. Hist. Nat. des Courouc., pl. 14.

Trogon cinnamomeus, Temm. Mon. of Trog. in Pl. Col.

Harpactes Duvaucelii, Swains. Class. of Birds, vol. ii. p. 337.

Trogon (Harpactes) Duvaucelii, Gould, Mon. of Trogons, List of Plates, sp. 32.

Trogon fasciatus, var. β , Lath. Gen. Hist. of Birds, vol. iii. p. 213.

Ramguba of the Natives of Malacca.

By most ornithologists the present species is considered identical with the bird figured by LeVaillant in his "Histoire Naturelle des Couroucous" under the name of *Trogon rutilus* ; but as that figure does not agree with any member of the family, and must have been coloured after the artist's fancy, I consider M. Temminck perfectly justified in giving a new specific name to the bird here represented. Vieillot's description is equally as faulty as LeVaillant's figure, for he commences his description by stating that the head of the bird is of a sombre green ; the back, scapularies, rump and upper tail-coverts of a lively red, and the six middle tail-feathers of the same hue ;—whereas the head is jet-black, the back and scapularies of a light cinnamon-brown, the upper tail-coverts fine scarlet, and the two middle tail-feathers only of a cinnamon-brown. LeVaillant's artist doubtless had this or some nearly allied species in view ; but the colouring could not have been copied from a real specimen, and Vieillot's description was probably taken

from the defective drawing. Not wishing to increase the specific names of the family, I have figured in the following Plate a species which I believe to be distinct from the bird under consideration; and as it has a uniformly coloured back, and more nearly approaches to LeVaillant's figure, I have retained the name of *rutilus* for it, trusting that ornithologists will in future adopt this view of the subject. Had I given a new name, I might have been excused, and even commended for so doing.

For brilliancy of colouring nothing can surpass the tints that adorn the plumage of this little Trogon, which, unlike every other species of the family that has come under my notice, has the rump and lower portion of the back of a scarlet colour, vying in every respect with the rich and fiery hue of the breast. The admiration with which these birds must be viewed even when seen in preserved collections will enable us to form some idea of their still greater beauty in a state of nature, when darting meteor-like through the dark recesses of the dense and gloomy parts of the forests; when so seen they cannot fail to call forth the admiration and increase the enthusiasm of the naturalist who has ventured to seek their haunts in those primitive districts.

I believe the true habitat of the present species, which is perhaps the most highly and beautifully coloured member of the group of birds to which it belongs, is Sumatra and Borneo, while the other (*rutilus*) is from Malasia.

The sexes of the *T. Duvauceli* present the usual difference in the less brilliant colouring of the female, as may be clearly perceived by consulting the above description, or more readily by glancing at the accompanying Plate, where both are figured of the natural size.

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HARPACTES RUTILUS.

J. Gould and H. C. Richter, del et lith

Hullman & Watson, Imp

HARPACTES RUTILUS.

Malacca Trogon.

SPECIFIC CHARACTER.

Mas.—*Capite et gulâ nigris ; dorso et uropygio rufescenti-fuscis.*

Male.—Head and neck black ; all the upper surface rich reddish cinnamon ; wings black, the coverts and secondaries crossed by numerous fine, irregular, wavy lines of white ; primaries margined externally with white ; breast, all the under surface, and under tail-coverts fine rosy scarlet ; two centre tail-feathers cinnamon-brown, slightly tipped with black ; the two next black ; the three outer ones on each side blackish brown, largely tipped with white ; bill and gape deep cobalt-blue ; the culmen broadly, and the margins narrowly bordered with black or horn-colour ; bare skin above the eye pale sky-blue ; irides dark brown ; feet dusky blue.

Total length, $10\frac{1}{2}$ inches ; *bill*, 1 ; *wing*, $4\frac{1}{4}$; *tail*, $5\frac{3}{4}$.

Female.—Head and throat reddish brown ; upper surface as in the male, but darker ; breast cinnamon-brown ; abdomen and under tail-coverts very light cinnamon-brown, washed with a rosy hue ; primaries and secondaries black, crossed by narrow ochreous bands ; two centre tail-feathers cinnamon-brown, the remainder as in the male.

ENOUGH has been said in my description of *Harpactes Duvauceli* respecting my reasons for applying the term *rutilus* as a distinctive appellation for this bird, which is a native of the Malayan peninsula, and which, so far as I am able to judge from an examination of a vast number of specimens, never has the fine scarlet mark on the rump and upper tail-coverts ; independently of this difference, the present species is a larger and more robust bird than the *H. Duvauceli* ; it moreover has a thicker bill, and the whole of the upper plumage much more dense. Specimens frequently occur in collections sent from Singapore, but which I believe are generally made in Malacca ; at this moment I have several of both sexes before me which I am sure are fully adult, and yet there is not the slightest trace of the scarlet on the rump of either of them ; neither have I seen any indications of it in the specimens contained in the collection at the British Museum, nor in those in the Museum of the East India Company, and in those in the possession of T. C. Eyton, Esq., and others. In a letter transmitted to me by A. R. Wallace, Esq., that gentleman says, “ I think there are four species of Trogons in Malacca, but as I only obtained males of two of them, I cannot be certain ; two of them are of the average size, and the other two smaller. Of the smallest I have only a female in a bad state of plumage ; I believe it is *H. rutilus*. The bill and the skin of the gape are deep cobalt-blue ; the culmen broadly, and the margins narrowly bordered with black or horn-colour. The bare skin above the eye is pale sky-blue ; the irides dark brown, and the feet dusky blue.” The bird referred to by Mr. Wallace is the bird here figured, and not the *H. Duvauceli*.

The usual difference is observable in the colouring of the sexes, which are correctly represented on the accompanying Plate, of the natural size.

